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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/732,914

Applicant(s)

EL SAYED ET AL.

Examiner

Kimnhung Nguyen

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Preliminary filed on 5/21/04.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/21/04, 8/23/04, 1/31/05, 2/22/05, 7/22/05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This application has been examined. The claims 1-13 are pending. The examination results are as following.
2. Preliminary Amendment filed on 5/21/06 has been entered.

#### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show “the remote image-producing source 104” as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1- 3, 7, 9, 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki (US 6,563,626).

As to claim 1, Iwasaki discloses in fig. 22A, a face-mounted apparatus (150) having spectacles and a video display integrated into the spectacles (because Iwasaki discloses the head mounted display 200 is attached to the pair of glasses at a position that the ear piece 170 or 171, see col. 25, lines 21-23), the apparatus comprising:

an image producing source (see col. 2, lines 19-25);

and a virtual image diffuser (fig. 27A) having a display (16), a mirror (152), and terminal lens (14), the virtual image diffuser being attached to a facial mounting and displaying virtual images from the image-producing source,

wherein the virtual image diffuser is positioned on the facial mounting away from a main line of side of the user, the virtual image diffuser directing a biased diffusion towards the user's pupil of the virtual images projected by the terminal lens (14, fig. 27A).

As to claim 2, Iwasaki discloses in fig. 27A that wherein the display (16), the mirror (152), and the terminal lens (14) are together carried by a chassis (casing 154) attached to a

Art Unit: 2629

mounting such that the mounting is quipped with a mechanism (see a screw mechanism, see col. 26, lines 12-119) for adjusting the position of the image projected towards the user's pupil, starting from a displacement of the virtual image diffuser (see the attaching the casing 219 to either the left ear piece 170 or the right ear piece 171, and allowing the user to move the casing 219 to adjust eye point alignment, means it adjust the position of the image projected towards the user's pupil, starting from a displacement of the virtual, see col. 26, lines 9-19).

As to claim 3, Iwasaki discloses further, wherein the chassis (casing 154) is arranged in an envelope inside which the display (16), the mirror (152) and terminal lens are attached, such that the chassis (154) is arranged in a an inherent dark chamber in side which the virtual image diffuser are assembled in proximity to one other (because in side the chassis may be still have another element but does not list in fig. 27A).

As to claim 7, Iwasaki discloses further, wherein the terminal lens (14) is equipped with a mechanism (screw mechanism) for adjusting its focal length (see col. 26, lines 12-16 and col. 29, lines 1-15).

As to claim 9, Iwasaki discloses further an audio connector (see microphone 416), which receives audio from a control unit (CPU 410, see col. 15, lines 40-48).

As to claim 10, Iwasaki discloses in fig. 11, a control unit (CPU 410) including a power source (see supplies power to the entire head mount display camera 460, see col. 15, lines 45-48).

As to claim 12, Iwasaki discloses further, wherein the mechanism for adjusting the position of the image projected towards the user's pupil (as discussed in claim 7) comprises pre-

Art Unit: 2629

defined notches in the chassis (related to fig. 22A, see casing 219, is formed with an aperture 151, see col. 25, lines 44-46).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (US 6,563,626).

Iwasaki disclose the dark chamber (casing 154) and which accommodate between them the display, mirror, and terminal lens. However, Iwasaki does not disclose that the dark chamber is composed of two half-shell joined together by interlocking.

Iwasaki discloses in fig. 27A, the dark chamber (casing 154) can be fixed to the glasses with the fixing portion 201 sandwiching the ear piece 170 or 171 between the clipping portions 206a and 206b, see col. 25, lines 24-27, this feature related to the dark chamber is composed of two half-shell joined together by interlocking).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the casing 154 can be fixed to the glasses with the fixing portion 201 sandwiching the ear piece 170 or 171 between the clipping portions as taught by Iwasaki into the face-mounted apparatus having dark chamber for producing the claimed invention because this would provide to casing is fixed more stable, and if the problems such as the casing 154 shifting

Art Unit: 2629

out of a desired position or falling off the eyeglasses can be prevented more reliably (see Iwasaki, see col. 25, lines 27-31).

As to claim 8, Iwasaki discloses a support unit arranged in a case (casing 154, fig. 27A) to envelope the virtual image diffuser. However, Iwasaki does not disclose a case includes of two half-shells joined together by interlocking.

Iwasaki discloses in fig. 27A, a support unit (fixing portion 201) arranged in a case (casing 154) can be fixed to the glasses with the fixing portion 201 sandwiching the ear piece 170 or 171 between the clipping portions 206a and 206b, see col. 25, lines 24-27, this feature related to the dark chamber is composed of two half-shell joined together by interlocking) and discussed in claim 4.

8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (US 6,563,626) in view of Cone et al. (US 2002/0089469).

As to claims 5-6, Iwasaki discloses the virtual image diffuser for bending the optical axis at right angles see col. 25, lines 65-67). However, Iwasaki does not disclose the virtual image diffuser is oriented between 29.7 degrees and 41.7 degrees or between 1 degree and 19 degrees laterally off of the main line of sight.

It would have been obvious for Iwasaki's system to have the virtual image diffuser is oriented between 29.7 degrees and 41.7 degrees or between 1 degree and 19 degrees laterally off of the main line of sight as claimed since such a modification would have involved a mere change in the size/range of the number. A change in size/range is generally recognized as being within the level of ordinary skill in the art.

Art Unit: 2629

See In re Rose, 105 USPQ 237 (CCPA 1995),

See In re Reven, 156, USPQ 679 (CCPA 1968).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (US 6,563,626) in view of Cone et al. (US 2002/0089469).

Iwasaki discloses the mechanism for adjusting the position of the image projected towards to the user's pupil as discusses above. However, Iwasaki does not teach the mechanism includes a knob.

Cone et al. discloses in fig. 5, a head mounted display system including the tension adjustment mechanism provide by adjustment knob 44 mounted on the collar contained in the front portion housing (see 0023).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the adjustment knob as taught by Cone et al. into the face-mounted apparatus of Iwasaki for producing the claimed invention because this would a low the frame 14 to accommodate a wide range of head sizes to securely but comfortably maintain the frame in the correct position on the user's head without slippage (see Cone et al. see 0023).

### ***Correspondence***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.



Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Kimnhung Nguyen  
Patent Examiner  
August 2, 2006